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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,699	12/23/2003	Akira Mori	64903-022	5496

7590

09/12/2006

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EXAMINER

SEVERSON, JEREMY R

ART UNIT PAPER NUMBER

3653

DATE MAILED: 09/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/743,699	MORI ET AL.	
	Examiner	Art Unit	
	Jeremy R. Severson	3653	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/23/03, 5/25/04</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 8-13, 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Wildenrath (GB 1326665).
3. Re claim 1, Wildenrath discloses a discrimination apparatus that detects a counterfeit paper, said discrimination apparatus comprising: an ultraviolet emission module (2) that irradiates a paper as an object of discrimination with ultraviolet radiation; a transmitted light measurement module (12) that measures intensity of transmitted light of ultraviolet radiation, which is transmitted through the paper; and a discrimination module (23, 24, 25) that determines the paper as counterfeit or as genuine, based on the observed intensity of the transmitted light.
4. Re claim 2, Wildenrath discloses a discrimination apparatus in accordance with claim 1, said discrimination apparatus further comprising: a fluorescence measurement module (3) that measures intensity of fluorescence, which is excited from the paper by the ultraviolet radiation, wherein said discrimination module determines the paper as counterfeit or as genuine, based on the observed intensity of the fluorescence as well as the observed intensity of the transmitted light.

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5. Re claim 3, Wildenrath discloses a discrimination apparatus in accordance with claim 1, wherein said transmitted light measurement module measures the intensity of the transmitted light at multiple different positions on the paper, and said discrimination module determines the paper as counterfeit or as genuine, based on measurement results at the multiple different positions (p. 4, col. 2, lines 87-95).
6. Re claims 4 and 8-10, Wildenrath discloses everything claimed, including a conveyor unit (4, 5) that conveys the paper relative to said ultraviolet emission module and said transmitted light measurement module facing each other, wherein the multiple different positions include a site set in a conveying direction.
7. Re claim 11, Wildenrath discloses a discrimination apparatus in accordance with claim 8, said discrimination apparatus further comprising: a visible radiation block filter (6) that excludes visible radiation from the light emission of said ultraviolet emission module, wherein said visible radiation block filter is located between said ultraviolet emission module and the conveyor path.
8. Re claims 12 and 13, Wildenrath discloses a discrimination apparatus in accordance with claim 9, said discrimination apparatus further comprising: a visible radiation block filter (7) that is located between said transmitted light measurement module and the conveyor path to exclude visible radiation; and an ultraviolet radiation block filter that is located between said fluorescence measurement module and the conveyor path to exclude ultraviolet radiation.
9. Re claim 16, Wildenrath discloses a discrimination method that detects a counterfeit paper, said discrimination method comprising: an ultraviolet emission step of

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irradiating a paper as an object of discrimination with ultraviolet radiation; a transmitted light measurement step of measuring intensity of transmitted light of ultraviolet radiation, which is transmitted through the paper; and a discrimination step of determining the paper as counterfeit or as genuine, based on the observed intensity of the transmitted light (p. 4, col. 2).

10. Re claim 17, Wildenrath discloses a discrimination method in accordance with claim 16, said discrimination method further comprising: a fluorescence measurement step of measuring intensity of fluorescence, which is excited from the paper by the ultraviolet radiation, wherein said discrimination step determines the paper as counterfeit or as genuine, based on the observed intensity of the fluorescence as well as the observed intensity of the transmitted light (p. 4, col. 2).

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wildenrath in view of Numata (US 2002/0015145).

13. Re claim 5, Wildenrath discloses everything claimed, except that Wildenrath discloses an ultraviolet emission module with a single ultraviolet-emitting element, rather than multiple ultraviolet-emitting elements. Numata teaches the use of multiple ultraviolet-emitting elements, in a case where the luminance of a single element is

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insufficient (par. 49). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use multiple ultraviolet-emitting elements in the apparatus of Wildenrath, as taught by Numata, in a case where the luminance of a single element is insufficient.

14. Re claim 6, Wildenrath discloses everything claimed, except that Wildenrath does not explicitly disclose that the transmitted light measurement module has multiple transmitted light-receiving elements. Numata teaches the use of multiple transmitted light-receiving elements for collecting light into an electrical signal (par. 36). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use multiple transmitted light-receiving elements in the apparatus of Wildenrath, as taught by Numata, for collecting light into an electrical signal.

15. Re claim 7, Wildenrath as modified by Numata comprises a discrimination apparatus in accordance with claim 6, said discrimination apparatus further comprising: a pattern storage unit that stores in advance an allowable range of intensity of transmitted light measured at the multiple different positions to give a criterion of determination of a genuine paper, wherein said discrimination module determines the paper as genuine, when at least a predetermined rate of the observed intensity of the transmitted light at the multiple different positions is included in the allowable range (Numata, par. 39).

16. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wildenrath in view of Takarida (EP 0668576).

17. Re claim 14, Wildenrath discloses everything claimed, including protective glasses (6, 7) that are respectively located between said ultraviolet emission module and the conveyor path and between said transmitted light measurement module and the conveyor path. Wildenrath does not explicitly disclose that said protective glasses are composed of a material that allows transmission of ultraviolet radiation but prohibits excitation of fluorescence by the ultraviolet radiation. Takarida teaches the use of such glasses in order to allow passage of ultraviolet rays and visible light but prevent dust and the like from entering (col. 4, lines 35-42). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the protective glasses of Wildenrath out of a material that allows transmission of ultraviolet radiation but prohibits excitation of fluorescence by the ultraviolet radiation, as taught by Takarida, in order to allow passage of ultraviolet rays and visible light but prevent dust and the like from entering.

18. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wildenrath and Takarida as applied to claim 14 above, and further in view of Liu (US 6407810).

19. Re claim 15, Wildenrath as modified by Takarida comprises everything claimed, but Wildenrath does not explicitly disclose that the filter reflects ultraviolet radiation. Liu teaches a filter that reflects radiation in order to direct the radiation away from the image capture device. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a reflective coat in the filter of Wildenrath as

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modified by Takarida, as taught by Liu, in order to direct the radiation away from the light detector.

***Conclusion***

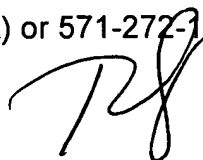
Any prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy R. Severson whose telephone number is (571) 272-2209. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Mackey, can be reached at 571-272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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